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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

September 30, 2019

Mr. Charles Keegan
Environmental Restoration, LLC
1666 Fabick Drive
Fenton, MO 63026

Certificate of Analysis

Project Name:	**Soil Samples**	Workorder:	**3059804**
Purchase Order:		Workorder ID:	**Shiloh Church Road/3-5467**

Dear Mr. Keegan:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, September 25, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Jessica Lee Smith (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Jessica Lee Smith
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3059804 Shiloh Church Road/3-5467

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3059804001	Area 02	Solid	9/24/2019 11:20	9/25/2019 09:03	Collected by Client

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SAMPLE SUMMARY

Workorder: 3059804 Shiloh Church Road/3-5467

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3059804 Shiloh Church Road/3-5467

Lab ID: **3059804001** Date Collected: 9/24/2019 11:20 Matrix: Solid

Sample ID: **Area 02** Date Received: 9/25/2019 09:03

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	ND		ug/kg	12.2	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Benzene	ND	1	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Bromochloromethane	ND	7	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Bromodichloromethane	ND	13	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Bromoform	ND	24	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Bromomethane	ND		ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
2-Butanone	ND		ug/kg	12.2	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Carbon Disulfide	ND	3	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Carbon Tetrachloride	ND		ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Chlorobenzene	ND	21	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Chlorodibromomethane	ND	18	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Chloroethane	ND		ug/kg	6.1	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Chloroform	ND	8	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Chloromethane	ND		ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,2-Dibromo-3-chloropropane	ND	29	ug/kg	6.1	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,2-Dibromoethane	ND	19	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,1-Dichloroethane	ND	5	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,2-Dichloroethane	ND	9	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,1-Dichloroethene	ND		ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
cis-1,2-Dichloroethene	ND	6	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
trans-1,2-Dichloroethene	ND	4	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,2-Dichloropropane	ND	11	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
cis-1,3-Dichloropropene	ND	14	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
trans-1,3-Dichloropropene	ND	15	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Ethylbenzene	ND	22	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
2-Hexanone	ND		ug/kg	12.2	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	12.2	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Methylene Chloride	3.9	2	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Styrene	ND	25	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,1,2,2-Tetrachloroethane	ND	26	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Tetrachloroethene	ND	20	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Toluene	ND	17	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Total Xylenes	ND	28	ug/kg	7.3	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,1,1-Trichloroethane	ND	10	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
1,1,2-Trichloroethane	ND	16	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Trichloroethene	ND	12	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2

ANALYTICAL RESULTS

Workorder: 3059804 Shiloh Church Road/3-5467

Lab ID: **3059804001** Date Collected: 9/24/2019 11:20 Matrix: Solid

Sample ID: **Area 02** Date Received: 9/25/2019 09:03

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
o-Xylene	ND	27	ug/kg	2.4	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
mp-Xylene	ND	23	ug/kg	4.9	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	56 - 124	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
4-Bromofluorobenzene (S)	114		%	51 - 128	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Dibromofluoromethane (S)	116		%	62 - 123	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
Toluene-d8 (S)	113		%	59 - 131	SW846 8260B	9/26/19 02:12	JTH	9/27/19 05:55	PDK	A2
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Acenaphthylene	ND		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Acetophenone	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Anthracene	ND		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Atrazine	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Benzaldehyde	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Benzo(a)anthracene	68.6		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Benzo(a)pyrene	102		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Benzo(b)fluoranthene	186		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Benzo(g,h,i)perylene	171		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Benzo(k)fluoranthene	90.9		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Biphenyl	134		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
4-Bromophenyl-phenylether	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Butylbenzylphthalate	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Caprolactam	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Carbazole	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
4-Chloro-3-methylphenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
4-Chloroaniline	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
bis(2-Chloroethoxy)methane	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
bis(2-Chloroethyl)ether	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Chloronaphthalene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Chlorophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
4-Chlorophenyl-phenylether	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Chrysene	179		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
mp-Cresol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
o-Cresol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Di-n-Butylphthalate	547		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A

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ANALYTICAL RESULTS

Workorder: 3059804 Shiloh Church Road/3-5467

Lab ID: **3059804001** Date Collected: 9/24/2019 11:20 Matrix: Solid

Sample ID: **Area 02** Date Received: 9/25/2019 09:03

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Di-n-Octylphthalate	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Dibenzo(a,h)anthracene	ND		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Dibenzofuran	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
3,3-Dichlorobenzidine	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,4-Dichlorophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Diethylphthalate	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,4-Dimethylphenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Dimethylphthalate	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,4-Dinitrophenol	ND		ug/kg	491	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,4-Dinitrotoluene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,6-Dinitrotoluene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
1,4-Dioxane	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
bis(2-Ethylhexyl)phthalate	4960		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Fluoranthene	194		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Fluorene	ND		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Hexachlorobenzene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Hexachlorobutadiene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Hexachlorocyclopentadiene	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Hexachloroethane	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Indeno(1,2,3-cd)pyrene	113		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Isophorone	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Methylnaphthalene	225		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Naphthalene	263		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Nitroaniline	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
3-Nitroaniline	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
4-Nitroaniline	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Nitrobenzene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Nitrophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
4-Nitrophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
N-Nitroso-di-n-propylamine	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
N-Nitrosodiphenylamine	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
n-Nonane	ND	30	ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Pentachlorophenol	355		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Phenanthrene	203		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Phenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Pyrene	120		ug/kg	61.4	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	123	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3059804 Shiloh Church Road/3-5467

Lab ID: **3059804001** Date Collected: 9/24/2019 11:20 Matrix: Solid

Sample ID: **Area 02** Date Received: 9/25/2019 09:03

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2,3,4,6-Tetrachlorophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,4,5-Trichlorophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2,4,6-Trichlorophenol	ND		ug/kg	246	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	31.3		%	19 - 132	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Fluorobiphenyl (S)	51.5		%	40 - 110	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
2-Fluorophenol (S)	33.1		%	26 - 116	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Nitrobenzene-d5 (S)	49.5		%	38 - 112	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Phenol-d5 (S)	42.1		%	35 - 111	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
Terphenyl-d14 (S)	52.7		%	45 - 126	SW846 8270D	9/26/19 02:00	S7M	9/26/19 10:13	GEC	A
WET CHEMISTRY										
Moisture	19.1		%	0.1	S2540G-11			9/26/19 08:32	AXD	
Total Solids	80.9		%	0.1	S2540G-11			9/26/19 08:32	AXD	

Jessica Lee Smith
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3059804 Shiloh Church Road/3-5467

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3059804001	1	Area 02	SW846 8260B	Benzene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Benzene. The % Recovery was reported as 59.5 and the control limits were 75 to 132.				
3059804001	2	Area 02	SW846 8260B	Methylene Chloride
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 66 and the control limits were 68 to 133.				
3059804001	3	Area 02	SW846 8260B	Carbon Disulfide
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 44.2 and the control limits were 47 to 144.				
3059804001	4	Area 02	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 59.8 and the control limits were 66 to 133.				
3059804001	5	Area 02	SW846 8260B	1,1-Dichloroethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 72.6 and the control limits were 74 to 131.				
3059804001	6	Area 02	SW846 8260B	cis-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 52.2 and the control limits were 75 to 128.				
3059804001	7	Area 02	SW846 8260B	Bromochloromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 56.5 and the control limits were 71 to 120.				
3059804001	8	Area 02	SW846 8260B	Chloroform
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chloroform. The % Recovery was reported as 62.1 and the control limits were 73 to 126.				
3059804001	9	Area 02	SW846 8260B	1,2-Dichloroethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethane. The % Recovery was reported as 64.6 and the control limits were 69 to 132.				
3059804001	10	Area 02	SW846 8260B	1,1,1-Trichloroethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1,1-Trichloroethane. The % Recovery was reported as 65.5 and the control limits were 68 to 131.				
3059804001	11	Area 02	SW846 8260B	1,2-Dichloropropane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloropropane. The % Recovery was reported as 65.1 and the control limits were 78 to 131.				
3059804001	12	Area 02	SW846 8260B	Trichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 46.5 and the control limits were 72 to 129.				
3059804001	13	Area 02	SW846 8260B	Bromodichloromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromodichloromethane. The % Recovery was reported as 60.6 and the control limits were 74 to 127.				
3059804001	14	Area 02	SW846 8260B	cis-1,3-Dichloropropene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 48.3 and the control limits were 76 to 123.				

ANALYTICAL RESULTS

Workorder: 3059804 Shiloh Church Road/3-5467

3059804001	15	Area 02	SW846 8260B	trans-1,3-Dichloropropene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,3-Dichloropropene. The % Recovery was reported as 44.1 and the control limits were 77 to 123.

3059804001	16	Area 02	SW846 8260B	1,1,2-Trichloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1,2-Trichloroethane. The % Recovery was reported as 56.9 and the control limits were 79 to 123.

3059804001	17	Area 02	SW846 8260B	Toluene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Toluene. The % Recovery was reported as 51.4 and the control limits were 73 to 129.

3059804001	18	Area 02	SW846 8260B	Chlorodibromomethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chlorodibromomethane. The % Recovery was reported as 50.2 and the control limits were 75 to 124.

3059804001	19	Area 02	SW846 8260B	1,2-Dibromoethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dibromoethane. The % Recovery was reported as 46.2 and the control limits were 76 to 127.

3059804001	20	Area 02	SW846 8260B	Tetrachloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 35.2 and the control limits were 58 to 137.

3059804001	21	Area 02	SW846 8260B	Chlorobenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chlorobenzene. The % Recovery was reported as 38.5 and the control limits were 76 to 125.

3059804001	22	Area 02	SW846 8260B	Ethylbenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Ethylbenzene. The % Recovery was reported as 40.4 and the control limits were 73 to 133.

3059804001	23	Area 02	SW846 8260B	mp-Xylene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte mp-Xylene. The % Recovery was reported as 37.8 and the control limits were 72 to 130.

3059804001	24	Area 02	SW846 8260B	Bromoform

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromoform. The % Recovery was reported as 46 and the control limits were 68 to 131.

3059804001	25	Area 02	SW846 8260B	Styrene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Styrene. The % Recovery was reported as 37.2 and the control limits were 77 to 130.

3059804001	26	Area 02	SW846 8260B	1,1,2,2-Tetrachloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1,2,2-Tetrachloroethane. The % Recovery was reported as 54.5 and the control limits were 72 to 134.

3059804001	27	Area 02	SW846 8260B	o-Xylene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 38.2 and the control limits were 75 to 129.

3059804001	28	Area 02	SW846 8260B	Total Xylenes

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Total Xylenes. The % Recovery was reported as 38 and the control limits were 73 to 130.

3059804001	29	Area 02	SW846 8260B	1,2-Dibromo-3-chloropropane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dibromo-3-chloropropane. The % Recovery was reported as 42.1 and the control limits were 52 to 151.

3059804001	30	Area 02	SW846 8270D	n-Nonane

ALS-Middletown does not hold PADEP NELAP accreditation for this analyte by this method of analysis.

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3059804 Shiloh Church Road/3-5467

Lab ID	Sample ID	Analysis Method	Prep Method
3059804001	Area 02	S2540G-11	
3059804001	Area 02	SW846 8260B	SW846 5035
3059804001	Area 02	SW846 8270D	SW846 3546

301 Fulling Mill Road
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

* 3059804 *

of

Client Name: ENVIRONMENTAL Restoration LLC
Address: 1666 Fairfield Dr. FENTON, MO 63026
Contact: CHARLIE KEEGAN
Phone#: 609 304 2996
Project Name/#: SHILOH CHURCH Rd. / 3-5467
Bill To:

TAT: [ ] Normal-Standard TAT is 10-12 business days. [X] Rush-Subject to ALS approval and surcharges.
Date Required: FRI 9/27 3 DAY TAT Approved?
Email? [X] C.KEEGAN@ERLLC.COM
Fax? [ ] -Y No.:

Container Type: C
Container Size: 40Z
Preservative: N/A

ANALYSES/METHOD REQUESTED: TOTAL VO + SVO

W.O. Temp: 4C Therm ID: TH-403
Analyst Initials: el
Courier/Tracking #: Fedex / 776324014464
Purchase Order #:

Project Comments: 3 DAY TAT

ALS Field Services: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment
Other:

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
1	AREA 07	09/24/19	1120	C	SO	7	HOLD SAMPLE FOR 60 DAYS
2							
3							
4							3 DAY TAT
5							
6							
7							
8							
9							
10							

SAMPLED BY (Please Print): C. KEEGAN
Sampler Comments: 3 DAY TAT

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	C. Keegan / ERLLC	9/24/19	1400	2	Fedex		
3	Fedex			4	el	09-25-19	0903
5				6			
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE/DOD
Special Processing: [ ] USACE
Reportable to PADEP? Yes [ ] No [X] PWSID #
Sample Disposal: [X] Lab [ ] Special
EDDS: Format Type-
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [X] VA [ ] other

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Middletown, PA 17057

Rev 04/19

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: Enviromental Restoration Work Order #: 3059804 Initials: DN Date: 9/25

1. Were airbills / tracking numbers present and recorded?	NONE	(YES)	NO
Tracking number: See COC.			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	(N/A)	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	(NO)
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #: _____

Temperature (°C): 4

Thermometer ID: 403

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 4/29/2019